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The southernmost known locality for *Kinosternon leucostomum* (Reptilia, Testudines, Kinosternidae), El Oro province, southern Ecuador

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Abstract: An adult female *Kinosternon leucostomum* was found in Buenaventura Forest Reserve, El Oro province, Ecuador, on 1 August 2014 at an altitude of 523 m above sea level. This is the first report for this species in the province and is about 130 km south of the previously southernmost known location.

Key words: Buenaventura Reserve, El Oro, Ecuador, *Kinosternon leucostomum*, range extension

The American mud or musk turtles (family Kinosternidae) are a New World clade of small aquatic to semi-aquatic species distributed from Canada to Argentina. This clade is represented by 4 genera and 24 or 25 species (de la Fuente *et al*. 2014; Iverson *et al*. 2013). Of the two species that occur in Ecuador, only one, *Kinosternon leucostomum* Cope, 1885, occurs along the Pacific Coast (Rodríguez-Guerra 2014). It ranges from Veracruz, Mexico through Central America, along both the Pacific and Atlantic coasts, Colombia and western Ecuador. According to de la Fuente *et al*. (2014), it is probably not present in northwestern Peru as stated by Rodríguez-Guerra (2014). Two subspecies are recognized: a northern (*K. leucostomum leucostomum*) and a southern one (*K. leucostomum postinguinale*) (de la Fuente *et al*. 2014). The generic taxonomy, at present, is debated since Iverson *et al*. (2013), using both mitochondrial and nuclear markers, revealed the existence of three well-resolved clades within the Kinosterninae and *K. leucostoma* was placed in a new genus, *Cryptochelys*. However, a subsequent analysis did not support the same three clades (Spinks *et al*. 2014). The species was reported in Ecuador from five northwestern and central provinces: Esmeraldas, Guayas, Los Ríos, Pichincha and Cañar (Cisneros-Heredia 2006; Rodríguez-Guerra 2014). It is locally known as taparabo, tapaculo or jicotea. It is a semi-aquatic

Figure 1. Adult female of *Kinosternon leucostomum* (photo: J. Torres-Porras).

species that inhabits a variety of aquatic habitats, including brackish water, but can be often found on land (Rodríguez-Guerra 2014). Its altitudinal range extends from sea-level to 1,400 m (Carr and Almendáriz 1989) or 1,700 m (Almonacid *et al*. 2007). The southernmost known location was reported in the province of Cañar, at Manta Real (02°33′12″ S, 079°21′51″ W) (Almendáriz and Carr 2012) was based on personal communications from locals and was later included in the detailed range map by Rodríguez-Guerra (2014). It is considered endangered in Ecuador (Carillo *et al*. 2005).

On 1 August 2014 during fieldwork in the Buenaventura Reserve, El Oro province, an adult female (Figures 1 and 2; carapace length 112.1 mm) was found crossing the road about 300 m from the river Quebrada Buenaventura (15°45′00″ S, 044°25′30″ W, altitude 523 m above sea level). Another animal was seen on 26 May 2014 and was confirmed as *K. leucostomum* based on photographs (M. Gálvez pers. comm.). This is the first report for this species in the province El Oro, and is about 130 km south of the previously southernmost known location

Figure 2. Bottom of the adult female of *Kinosternon leucostomum* (photo: D. Cogălniceanu).

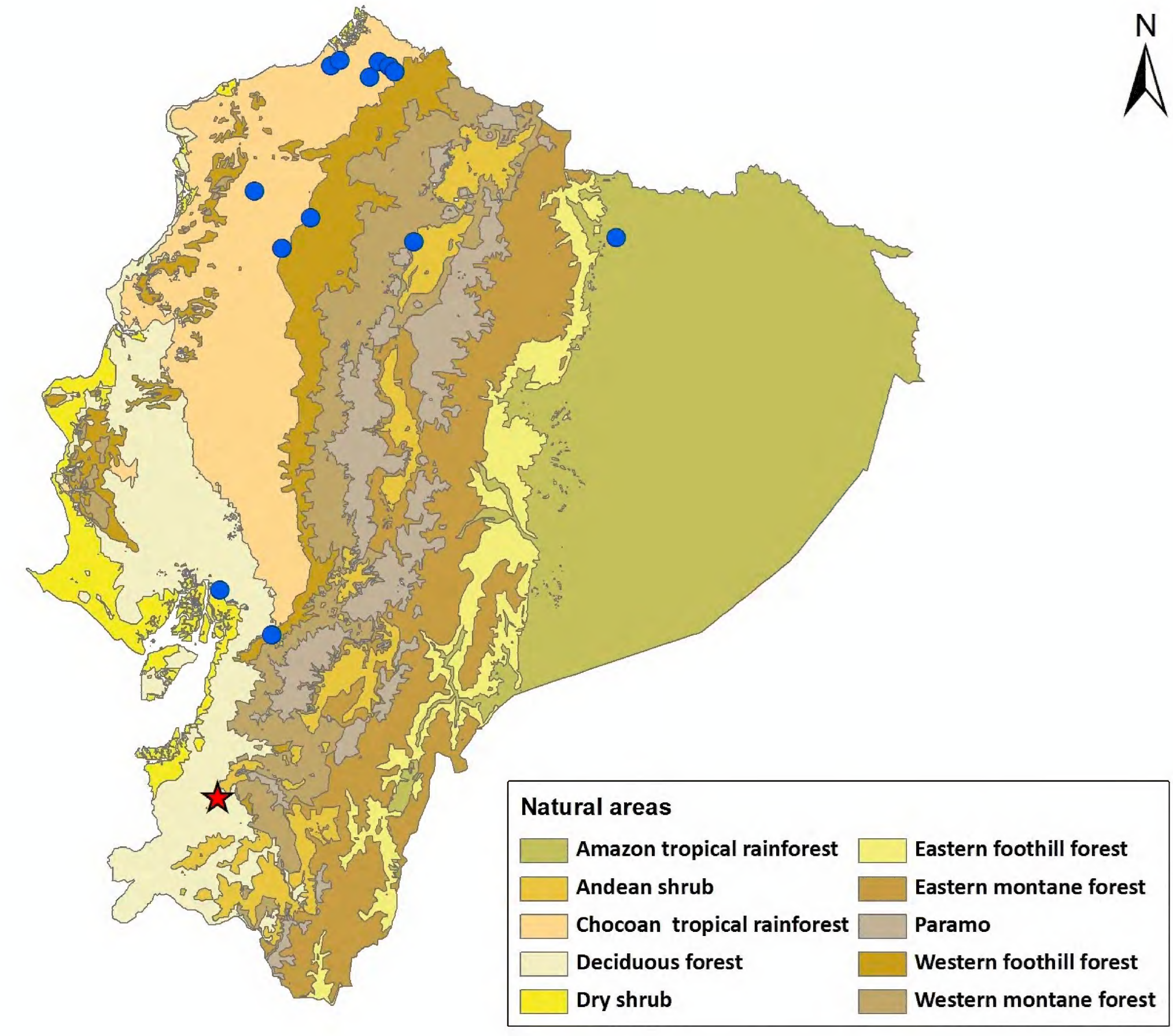

Figure 3. The updated known distribution of *Kinosternon leucostomum* in Ecuador: previously known locations (blue dots) compiled by Torres-Carvajal *et al.* (2014) and the newly reported one (red star).

(Figure 3). We assume that this is close to the southern range limit of the species, since it is in the transition zone between the tropical and subtropical humid and the dry Tumbesian climate zone. The species was not reported previously despite intensive herpetological surveys done in the area (Yánez-Muñoz *et al.* 2013). Nevertheless, the site is only 55 km from the Peruvian border, and hence wetlands near Tumbes, Peru, should be surveyed for its presence.

Cisneros-Heredia (2006) recommended that records of *K. leucostomum* from outside its currently known distribution range must be evaluated carefully, as they can result from artificial introductions. Based on our discussion with the locals that confirmed its presence, we are confident that the Buenaventura Reserve supports a natural population of the species.

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